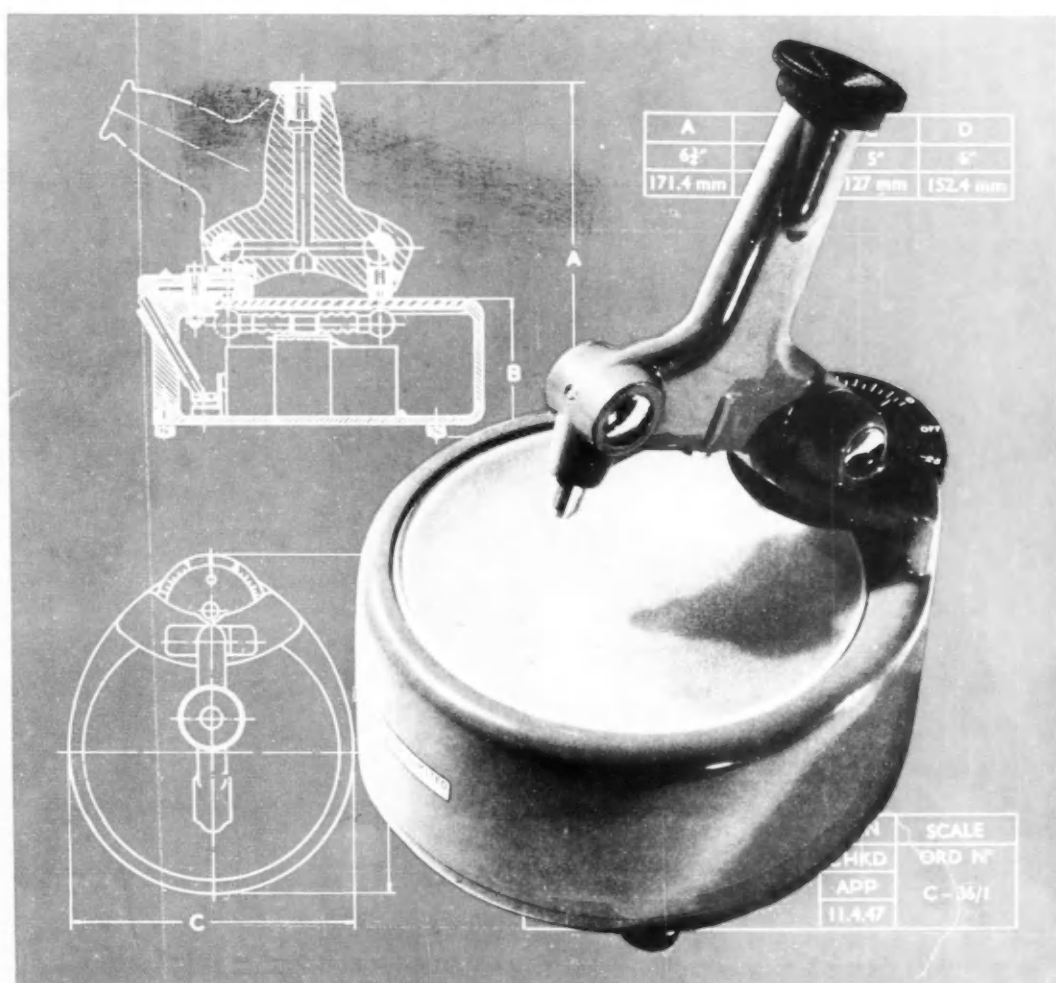


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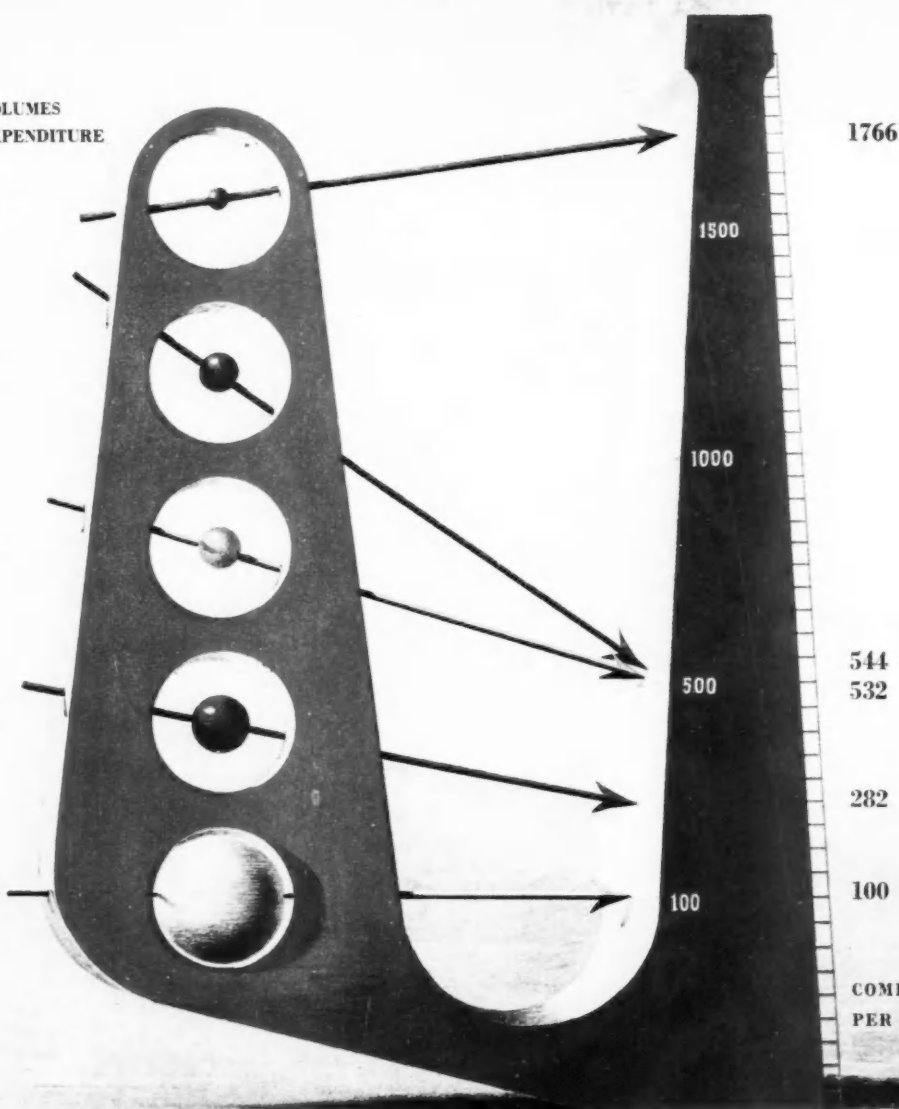
A MONTHLY JOURNAL ISSUED BY THE COUNCIL OF INDUSTRIAL DESIGN



NUMBER ONE • JANUARY 1949

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DESIGN

NO. 1 JANUARY 1949 · TWO SHILLINGS

A MONTHLY JOURNAL for industry, issued by the Council of Industrial Design and by the Scottish Committee of the Council. *Editorial address:* Tilbury House, Petty France, London SW1.

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Industry and design

THIS JOURNAL BEGINS publication with one purpose, and one purpose only: to help industry in its task of raising standards of design. We believe the task is urgent. That British goods shall be well designed is desirable as a sign to the world of our commercial and cultural vitality; and it is essential for the economic well-being of our country.

The urgency of the task, we are well aware, does not make it easy. There are many apparent enemies to good design, and in skirmishing with them we soon find that though some are mirages, some are real. The biggest and grimmest foe of all has been apathy—complete lack of interest in design: but this is gradually weakening. Another foe is the refusal to accept responsibility—the designer's eagerness to blame the manufacturer for poor design, the manufacturer's eagerness to blame the shopkeeper, and the shopkeeper's to blame the public.

A third enemy to good design which must be squarely faced is the fact that between some manufacturers and some designers there is a mutual distrust *which is not always without foundation*. It must be admitted that in the past there have been manufacturers who bought "roughs" and then produced finished articles from them; who did not tell the de-

signer all that he needed to know about the manufacturing facilities available; whose salaries for staff designers and fees for consultants might have come out of the petty-cash account. But it must also be admitted that there have been designers with an inadequate knowledge of technical processes; a reluctance to leave snug studios in London W1 or WC1 to visit factories in Bromwich or Govan or Runcorn; a method of charging based on what can be squeezed out of the client rather than what the job is worth.

In DESIGN, we make no excuses for one side or the other; but we urge on both that unless there is sufficient tolerance and sufficient mutual respect to change this state of affairs, the outlook for design is gloomy. We hope to make our own contribution towards a better relationship by publicising satisfactory solutions of design and production problems—in other words, by reporting and illustrating new products which are well designed and well made. Fortunately there is now no need to write of good design as an ideal that cannot be attained, a theory that cannot be illustrated by practical examples: it is already practised by many firms in many fields of industry—and their number is growing. Though the manufactured product is the keystone of their design policy, the existence of such a policy is evident in all their activities, from plant layout to packaging.

What we mean by *good* design is set out by Gordon Russell, Director of the Council of Industrial Design, in an article which begins on the next page. Good design is not simply a question of personal taste—A's liking for pink stripes or B's for green spots; as Mr Russell points out, "the first design question is *Does it work?*" In any useful product, efficiency in the purpose for which it is intended is essential—and the designer who achieves this quality has usually gone a long way towards achieving pleasant appearance.

Though the standard of design in British goods affects their designers and makers more directly than anyone else, it ultimately affects the prosperity of the nation as a whole. More and more people are realising this fact—not only employers (witness the Industrial Art Committee of the Federation of British Industries) but employees also. A significant resolution was carried at a recent council meeting of the General Federation of Trade Unions: the meeting, "believing that an improving standard of life of the people of Great Britain will be determined by our ability to export an increasing volume of goods," considered it imperative "that articles for export must be of the best design and quality." We agree: but we would add the rider that a high standard of design for the home market is, in the long run, vital to a healthy export trade. Different *styles* may be needed to meet the requirements of different markets, but within each style the same standard should be aimed at: the best of its kind.

WHAT IS GOOD DESIGN ?

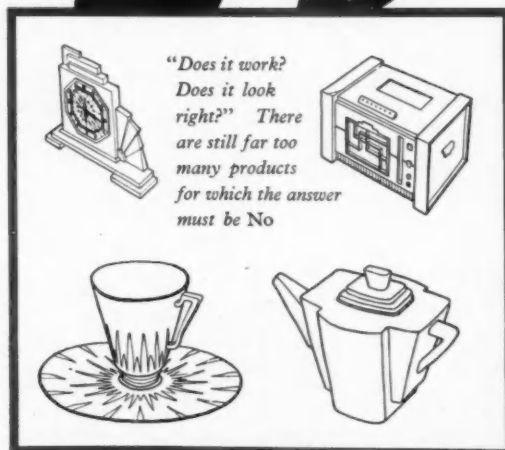
by Gordon Russell CBE MC RDI FSIA

MANY PEOPLE SPEAK of good quality as if it were made up of good workmanship and good materials alone: but without good design it is impossible to make the most of these qualities. *Good design, indeed, is an essential part of a standard of quality.* Without it, the manufacturer cannot give the best service, through his products, to the consumer—to the community of which he is himself a part and from which he derives his livelihood.

What does the consumer demand in a manufactured article? He demands something which is well made of good and suitable materials, which does its job efficiently and gives him pleasure, at a price he can afford to pay. So the first design question is "Does it work?" You have all seen clocks with hour and minute hands so similar that it is not easy to tell the time, teapots which do not pour well, kettles which burn your hand, handles which pinch your fingers. These are all examples of bad design, and there are many others.

Though "Does it work?" is a good approach to design, it will not take us all the way. Even where science can virtually define shapes, as in the case of the aeroplane, one of our most famous aircraft designers has said: "I like a thing to look right. If it doesn't, although I may not be able to prove scientifically that it is wrong, I have often found out later that it is." Here is a practical application of aesthetics which may seem strange, yet I can think of many others: dark and dirty factories, ugly dull-coloured machinery, unpleasant lettering, inefficient packaging, disregard of shape and texture and colour—all forms of bad design—will be taken more seriously in the future, because they are deterrents of production and sales.

Good design always takes into account the technique of production, the material to be used, and the purpose for which the object is wanted. You cannot get satisfactory results by designing for hand production and then turning over the same design to the machine. Nor can you design for one material and then make the object in another. The wax candle was the best form of illuminant in its day, but as a prototype for electric light it leaves much to be desired. The development of the railway-carriage was arrested for several generations because it was thought of as a series of stage-coaches: not until the new idea of inter-communication was grasped did the corridor make possible improvements in design (larger windows, less draughty compartments, restaurant cars, lavatories).



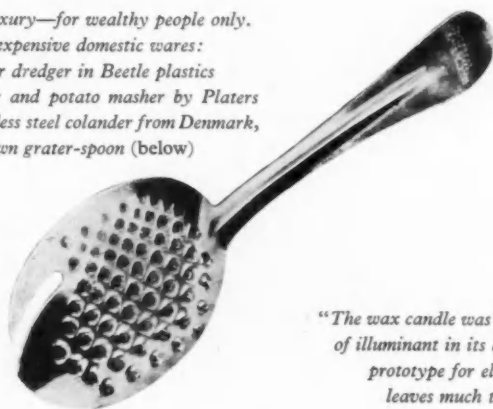
The materials to be used for any product should be chosen with care, not only to be economical from a manufacturing point of view, but to wear well in use. In plastics, for instance, it is no good making a tea-strainer of cellulose acetate, which will not stand up to hot water.

In places where easy cleaning is essential, a smooth surface must be used, but a thoughtful use of rougher textures can often give variety and interest elsewhere. Here nature is a great teacher.

Then we come to the question of ornament. Today, much of the beauty we associate with the machine springs from intense preoccupation with the best way of achieving a given result by sparing use of suitable materials rather than by added decoration. But from earliest times, men have loved to decorate the things they made with simple geometrical patterns, pictures of animals, trees and so on; and the evolution of a contemporary decorative style is a problem we have yet to solve. Many articles in plastics try to give an impression of having been carved by hand, whereas they are moulded in a press; the so-called carving is lifeless. Refrigerators, which remain stationary, are streamlined as if they were aeroplanes or ships. And how



Good design is not a luxury—for wealthy people only. Here it is evident in inexpensive domestic wares: condiment set and sugar dredger in Beetle plastics (facing page); strainer and potato masher by Platers & Stampers Ltd; stainless steel colander from Denmark, by Ernst Voss; Nutbrown grater-spoon (below)



"The wax candle was the best form of illuminant in its day, but as a prototype for electric light it leaves much to be desired"



many objects have had three zigs up and three zags down plastered on them? These design clichés are not the right answer to a human need. We in Britain cannot afford to be left behind in this aspect of industrial design. It is bad business if our customers think of us as being uninterested in the look of our goods, but I could give you many instances where they have that impression to-day.

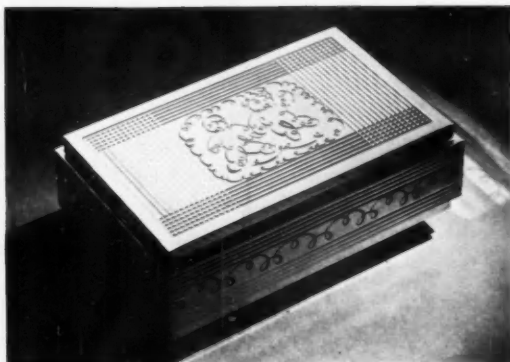
To any design problem there are many possible solutions; there is no one perfect solution, and sometimes, as in the design of a flower-vase, there are hundreds or even thousands of shapes which would do the job. The designer is a person who, among other things, is always studying shapes and so is able to evolve or select one which not only works well but means something. This applies equally to form and colour: the designer is able to give shape to aspirations which all of us possess, but which we have not the training to create for ourselves.

We can learn something of the meaning of good design by considering what it is NOT. To clear away one elementary misconception, let me say that good design is not precious, arty or highfalutin'.

Again, it is not a luxury that enters into the more ex-

pensive end of a trade only. It is true that new styles not infrequently start in luxury markets; indeed, I believe that luxury trades perform an indispensable function by enabling experiments of all sorts to be tried-out in a small way. But mass production so spreads the cost that there is no reason why well-designed things should not be available for everyone to buy. The idea that only wealthy people like well-designed things is as false as that they are the only people to get pleasure from looking at flowers, listening to music, or reading Shaw. Equally false is the notion that because a thing is low in price it cannot be of good quality.

Good design is not something that can be added to a product at a late stage in its planning or manufacture. It is fundamental. Before starting on a job, any designer worth his salt makes a complete survey of the problem. The manufacturer who is not prepared to place all the relevant information at his disposal cannot expect to get the best results. A clear statement of the problem is essential to its satisfactory solution. In what market is it proposed to sell the product? At what price? Against what competition? How will it be marketed? How packaged? What materials are to



Surface treatment: "Where easy cleaning is essential, a smooth surface must be used"—as in the GEC cooker above and stainless steel ware by Andrew Bros (Bristol) Ltd (centre, left). Elsewhere, "thoughtful use of rougher textures can give variety and interest." In the silver cigarette box (designed by A. R. Emerson and made by E. Silver & Co) hand-engraving and engine-turning contrast with each other, and with smooth polished surfaces. The textile design shows a woven pattern of different textures, emphasised by the use of different coloured yarns

be used? What machines? A detailed survey at the outset will save much trouble later.

There used to be many people who thought that an architect was employed to ensure that the elevation of a building should be in a given style, but in fact a good elevation grows out of a good plan: the architect's true function is to grasp the needs of a client—needs which he may not be able to state precisely—and crystallise them into a workable plan that is economic to build and pleasant to live, work or play in. The industrial designer is, as it were, another kind of architect—the co-ordinator in a team of specialists. He must, by the nature of his job, work as one of a group of tech-

nicians. At every stage of the work he must be closely in touch with other specialists, saying to one, "Is this the best way to machine this job, or shall we cut the corner?", to another, "What material shall we use here?", to a third, "Is this likely to give trouble in the packing department?", to a fourth, "Could you sell this for sixteen pounds ten?"—and so on. A designer calls on the experience of a great number of people in the firm for which he is working—works manager, sales staff, foremen, advertising and costing men, research staff and so on.

Research into design is a part of industrial research which in the past has been sadly neglected. Like re-



"Much of the beauty we associate with the machine comes from sparing use of suitable materials rather than added decoration"

School furniture in plywood and light alloy designed by James Leonard, MSIA; made by Educational Supply Association

Densitometer (for measuring optical densities) by Ilford Ltd: main components are aluminium castings. Also illustrated on front cover



Ambassador air-liner by Airspeed Ltd, Christchurch



search as a whole, it can only be tackled by adopting a policy which goes steadily ahead over a period of years; you cannot expect each year's results to pay for themselves. There are no short cuts. A firm cannot pack up bad design on Friday night and start churning out good design on Monday morning. It is not so easy as that; it is necessary to change the point of view of a number of people in the organisation. However, it is *not* necessary to start in a big way and perhaps throw up assured profits in the hope of securing others which may not mature. The design department that starts in a small way to-day is likely to grow until it becomes the mainstay of to-morrow. Good design does

not sell itself but it can be made a strong selling point. Its prestige value is great—and growing: the standard of public taste is rising.

An approach to design through horse-sense enables any intelligent person to appreciate what the designer's problem is—and that is what we need. We don't expect everyone to become expert designers; that is neither possible nor desirable. We cannot all become accountants, but we can learn enough to read a balance sheet. We cannot all become conductors but we can learn to appreciate music—and remember, no conductor could give his best to an audience of deaf mutes; there must be collaboration. It is the

same with design: a public which possesses critical standards is essential if design is to be as good as it might be.

Sometimes we hear it said that there is no such thing as good or bad design, that there are no real standards by which design can be assessed, that it is just a matter of personal taste; or that because an article sells in great quantities it *must* be well-designed. Sometimes, too, we are told that the subject is not a very important one; that hard-headed business men cannot be expected to waste their time on what they think is purely a question of aesthetics, and so on.

I have heard such criticisms on many occasions in the past; they are becoming rarer to-day. More and more people are realising that the question of industrial design is important to industry, and indeed to every citizen. In 1944 the Coalition Government, with all the preoccupations of the closing months of the war pressing on it, found time to set up the Council of Industrial Design, largely because it was felt that design was vital in our post-war export trade.

In 1951 the Festival of Britain will provide an opportunity to show that this country, which once led the world in design, is ready to assume leadership again. It is the Council's task to select a variety of products to be shown in the Festival: it is industry's responsibility to ensure that a first-rate range of goods is available. A permanent grading-up of standards, as distinct from a short-lived attempt to produce "stunt" designs, can do much to ensure the future prosperity of our country. "British made" ought always to mean well made of sound materials to a good design.

* *

The Council offers these services to British Industry

When a firm needs a designer either for a staff appointment or as a consultant or freelance, the Council's Record of Designers is freely at its service. This contains up-to-date records of designers in every field from engineering to typography, pottery to packaging, furniture to fashion. The work of every designer in the Record has been seen and appraised. No design problem should be regarded as too large or too small for the Council's consideration. Enquiries can be dealt with through the post or, preferably, by calling at a firm's works or offices: in either case, when the exact requirements are known, a short list of designers possessing suitable qualifications is submitted.

TRAINING FOR DESIGNERS

To bring design staffs' knowledge up to date, and to provide a broad background for specialist designers whose work does not keep them in touch with developments in the arts or in industries outside their own,

the Council holds courses from time to time—including refresher courses adapted to the needs of various types of industry. A recent course dealt with "Colour and Lighting in Factories and on Machines." Others are planned for the current year. Further courses can be arranged where a demand is known to exist. Particulars of forthcoming activities and general advice will be gladly supplied by the Council's Training Officer, who can also give information on design-training facilities in art and technical schools in all parts of the country.

TECHNICAL EXHIBITIONS

Even the most alert designer or design department finds difficulty in keeping pace with all the new materials that become available. To show such materials side by side, enabling comparisons to be made between alternatives, is a major aim of the Council's technical exhibitions. The first of these brought together the most comprehensive selection of synthetic boards and plywoods yet assembled: the exhibition aroused so much interest in industry that it was extended beyond its original time-limit, and dates are being discussed for its showing in Glasgow under the auspices of the Scottish Committee of the Council. Its catalogue forms a useful index of materials and their suppliers, with notes on suitable applications and availability. Other exhibitions are planned to include light alloys, plastics, metal finishes and packaging materials.

INDUSTRIAL OFFICERS

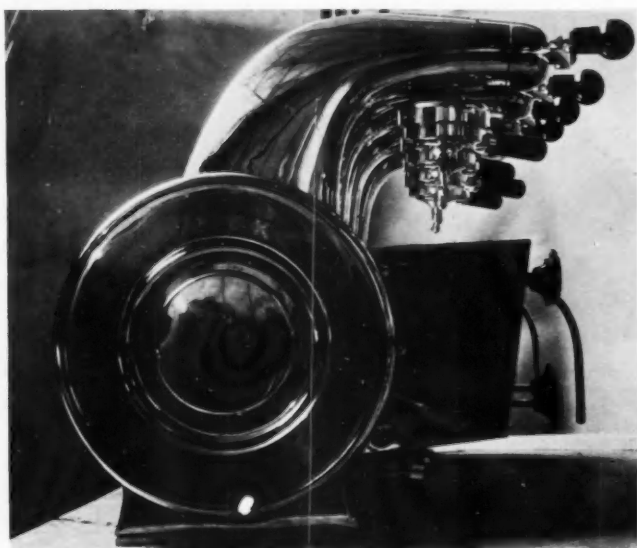
Where a firm's design problems do not fall under any of the headings listed above, it may be of advantage to discuss them with the relevant members of the Council's Industrial Staff, who are in touch with progressive firms, trade associations, Design Centres and research laboratories. At present they are concentrating on practical steps to promote the best possible display of British industrial design at the 1951 Festival of Britain. They will gladly give information on Festival opportunities for industry.

PUBLICITY FOR GOOD DESIGN

Among the public—including *tomorrow's public* in the schools—the Council uses exhibitions, film strips, wall cards, booklets, press and radio features to encourage the appreciation of good design. Because this appreciation takes practical shape as a preference for well-designed goods, it has a real commercial value for those who make and sell them.

COUNCIL OF INDUSTRIAL DESIGN, *Tilbury House, Petty France, London SW1 (Whitehall 6322).*

SCOTTISH COMMITTEE OF THE COUNCIL, *95 Bothwell Street, Glasgow C2 (Central 2991).*



For the national beverage: left, coffee percolator to make four cups, designed by Gio Ponti for La Pavoni, Milan; above, the Reflektor, a smaller domestic machine

ITALIAN JOURNEY

F. H. K. Henrion *FSIA* looks at design in post-war Italy

IT IS BOTH a designer's privilege and his curse that he cannot stop being a designer outside working hours or even on holiday. When I went to Italy in search of blue skies and seas, and to visit some classic monuments of art, I could not help seeing it all through spectacles coloured with a strong design tinge. My memories of the holiday add up only to a number of observations made during my journey; they are far from being an exhaustive survey—but judgment must be based on comparison and comparison on observation, and there was certainly a great deal to observe.

Before I come to contemporary design, a flash-back to the Renaissance background is required, for our Italian colleagues have the advantage of working against that background to-day. In the Renaissance period—unlike the present time—painters were not exclusively painters; they made the jump from two to three dimensions without hesitation, without even being aware of it. A painter sculpted, designed churches and jewellery; and an architect or goldsmith could be a painter of repute. It was only natural that Giotto should use architectural motives in the background of his paintings, and he was not content with copying what buildings he saw but invented new ones to suit his subject and imagination: so when he was asked to design the clock-tower for the Dome of Florence it seemed part of his everyday painter's job.

This is but one significant example among many. Costume, furniture, architecture and jewellery were not only depicted but *created* in Renaissance paintings; a man like Cellini could easily run a foundry, design monuments, jewellery and articles of everyday use such as ink-wells and candelabra, besides executing a painting of some society lady (and, in his case, managing also to write a most articulate and illuminating autobiography). There was no noticeable division between artist and designer; a problem which is acute to-day was then unknown. In Cremona and Bergamo there is a simultaneous development of superbly carved choir-stools and the manufacture of violins.

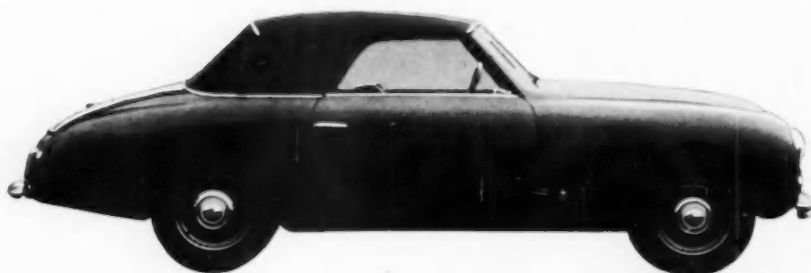
It is only natural, with this background, that Italian designers to-day tackle any problem in any field without hesitation. Thus in Milan, Gio Ponti, originally an architect, designed the Borletti sewing-machine, a coffee *Espresso* machine, showrooms, furniture and window displays. His sewing-machine is a pleasant contemporary solution that compares favourably with similar portables such as the Elna and Bernina in Switzerland. Until these machines came into production there was only the old type of sewing-machine that we all know, dating back to our grandparents' days. As time marched on and the electric light and the electric motor were invented, these new



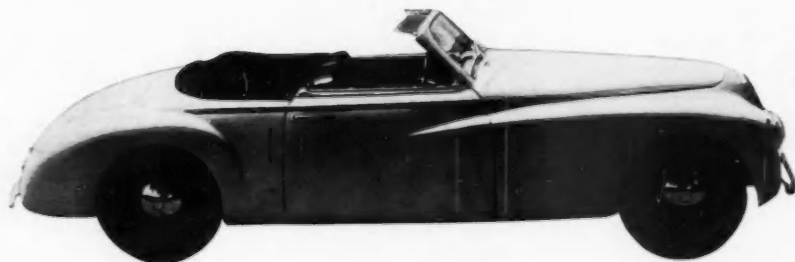
Alfa-Romeo SS: "the solution of having two lamps juxtaposed on each side seems successful and acceptable"



Lancia Aprilia cabriolet, with wheels "of a most pleasant pattern . . . perhaps reminiscent of the pre-war Bugatti"



Fiat 1100 with two main and two occasional seats. "Combines lightness of appearance with great width and solidity," the author comments



Italian body on Bristol chassis—a cabriolet designed and made, like all the other coachwork illustrated here, by Pinin Farina of Turin



Almost an institution—the Lambretta
(above) and Vespa runabout motor-cycles



Courtesy Motor Cycling

devices were merely screwed on to the old, barely altered, model; no attempt was made to incorporate them and find a new solution resulting from changed conditions and new elements. Ponti obviously made this attempt and the homogeneous Borletti is the result.

The Pavoni coffee machine, which also he designed, is a large fitting installed in many Italian bars to provide the national beverage. Here the problem was to combine mass production and individuality. Each cup is made with the same quantity of fresh coffee, housed in small receptacles under the overhanging arms. Hot steam is forced through the coffee under pressure so that a very potent brew trickles into a cup held underneath. The Pavoni unit can thus produce four cups at a time (and of course any number of units can be added). There are similar machines, each with five receptacles and a motor in each, propelling a whisk—at different speeds according to the operation—to produce a milk shake, an ice cream, *zabaglione*, etc. This very elaborate apparatus, beautiful in appearance and intricate in mechanism, can be found even in small restaurants and bars. I first came across it, together with the *Espresso* machine, in a small bar in an almost forgotten fishing village, where I found to my surprise that the two machines together cost the equivalent of £500. The explanation probably lies in the great importance the Italian attaches to these various beverages and to their skilful and accurate preparation; especially interesting in contrast with the plumbing arrangements in the same establishment.

There are many kinds of *Espresso* machines for domestic use, some in glass, but the majority in aluminium; they are, I consider, particularly interesting examples of good industrial design because in them the old traditional process of making coffee, combined with new material and technique, has re-

sulted in a revolutionary piece of domestic machinery, pleasant to the eye, easy to manipulate and clean, efficient in use.

With the Italian coffee-cult go, of course, a large number of different types of china and earthenware coffee cups. The classic set of small cups which I brought back is particularly attractive through its contrast of texture; rich earthenware on the outside and a thick, white, glazed lining. For converse effect, a set of earthenware bowls with handles uses black glaze on the outside and a transparent glaze for the interior, resulting in a rich contrast of terra cotta and Umbrian brown. The set of three costs half-a-crown, and they are, of course, fireproof.

In the street scene, by far the most striking design feature is the new Italian motor-car. Most of the new models are made by the four big firms that already enjoyed a world reputation before the last war. Italian designers took up the American lead, not to follow it half-heartedly as some car designers have done in other countries—they really made a job of it. It is true they took the hint from USA as a dress designer in England might take a hint from Paris, but they have found a way to combine the general American trends with elegance and with certain classic standards of aesthetics.

The Alfa-Romeo SS, with body by Pinin Farina, is a very pleasant example of this. The greatest problem of the "new look" in car design is to find a satisfactory solution of a front elevation which is complicated by its enormous width; American efforts to design a suitable radiator usually result in the most alarming grimaces. To me, the solution of having two lamps juxtaposed on each side seems most successful and acceptable, and could even be argued on functional grounds.

Two other Alfa-Romeo models, the Coupé and Berlina, seem to fall down on this "car-face" although



Earthenware bowls with black glaze outside and clear glaze inside; Fereca coffee cups and jug, unglazed externally but with a brilliant white glaze inside



The Borletti, designed by Gio Ponti, Italian architect and industrial designer, is one of the few really modern sewing machines in any country

their appearance is excellent in all other respects. The bend in the sloping windscreen looks very good and is claimed to deflect sun-glare, a problem perhaps more important in Italy than here. The Lancia cabriolet deserves special credit for its wheels, perhaps reminiscent of the pre-war Bugatti, but of a most pleasant pattern; again the solution of the front seems incomplete. The Fiat 1100 combines a lightness of appearance with great width and real solidity. A particularly interesting car for us must be the British-built Bristol with Italian coachwork.

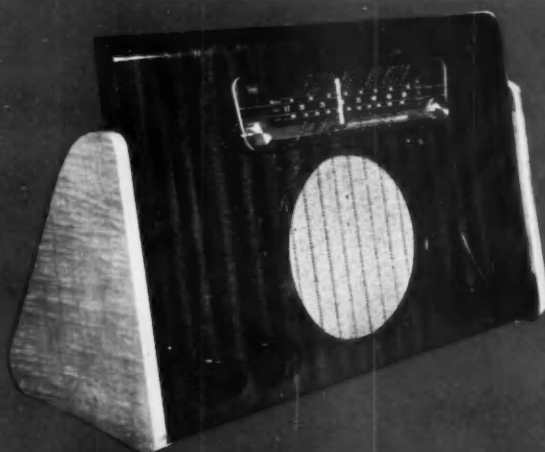
But the most important of all new Italian design-phenomena is without doubt the Vespa. This miniature motor-cycle, streamlined and extremely pleasant to look at, has become an important social factor in Italian village and town life: you see it everywhere in the streets and on the open road, whizzing past (hence the name—"wasp"). In the mornings you see business-men with a brief-case or commercial travellers with boxes of samples placed on the vast (for a motor-cycle) floor space. In the evenings you see young couples, the girl sitting sideways on the back seat

behind her escort, gaily chatting with him. At weekends, the Vespa (or its close rival, the Lambretta) will take Father, Mother, child and suit-case into the country; there is room for them all. You see these machines parked side by side in front of Ministries and it is surprising how many people afford them at a price equivalent to £80. Indeed, one may call them a new form of locomotion, a new entity which already has become almost an institution.

These scanty observations on design in Italy must not be concluded without mentioning the great variety of woven and printed textiles piled high in all the shop-windows. The richness of colour and pattern, and the large selection offered in each line, come as a surprise to the visitor from Britain.

Perhaps because I was a visitor in a strange country and the various manifestations of design were the more striking, I seemed to sense a similarity of aesthetic values among different products—similarity which, seen from a distance of many years, might be called the style of the mid-twentieth century.

THIRD IN THE LINE



Distinctive shape of the set is evident whether its back is in position . . .



. . . or removed to give access to chassis and compactly grouped components

Production costs lowered in latest baffle-board set

MURPHY RADIO have a reputation for plain speaking in their announcements to trade and public alike. For this reason radio dealers were probably not surprised when a new Murphy set was recently heralded in this way:

We all of us know that the changes which occur from year to year in broadcast receivers are not the result of radically new inventions, the use of which makes all past sets obsolete. The circuits used in the 124 have in general been known to us all for a number of years, while even the cabinet is merely the third in the line of baffle table sets which Murphy Radio started over two years ago.

To this unconventional opening G. Bernard Baker, Design Executive of Murphy Radio Ltd, added: "It is on detail and care in design of small points that the modern radio set stands or falls." Murphy's 124 may be quoted as an example of such "detail and care" purposefully applied.

Many people will remember the interest aroused by

the Murphy baffle board set at *Britain Can Make It*—a set that employed, for the first time in factory production, a flat or nearly flat board instead of a box-type cabinet. This feature, which amateur set-builders have long favoured, gives reproduction without boom; to quote Mr Baker again: "The properties of a baffle are closely connected with its size. If it were possible to house pieces of wood six foot square in an ordinary room . . . it is doubtful whether box-type cabinets would be used at all; if on the other hand nothing more than a foot square were possible, there would be no baffles."

The 124 represents the baffle board reduced to its smallest effective dimensions. This set is less costly than previous Murphy baffle board types, partly because it is smaller, partly also because it is simpler and has been designed with the definite aim of reducing production costs. Whether one finds its unconventional appearance wholly pleasing or not, one must

recognize in this new model a product of close co-operation between electrical, mechanical and cabinet designers, working together as a team under a design executive who is directly responsible to the managing director.

To-day the average listener makes his choice of programmes from a limited number of local stations instead of frequently twiddling the knobs in search of greater variety from more distant transmitters—a notable and recent change in listening habits. The electrical design of the Murphy 124 has accordingly been planned to maintain good quality of reproduction rather than give extreme sensitivity. The modifications of design which this entails have helped to bring down the price of the new model; ignoring, for the moment, Purchase Tax, it is only threequarters that of the previous Murphy baffle board set.

Production methods which have affected design and effected economy include the following:

1. Lugs are bent out of the main body of the chassis material; they take the place of brackets, made separately and screwed on, which would have been employed in pre-war practice. Two piercing and two bending tools are used in a ninety-ton press to shape the complete chassis of the new set.
2. Several components are die-cast (made from molten metal injected under pressure into a steel die). This process, extensively developed during the war and used to-day in many industries, is still something of a novelty in radio manufacture.
3. On the Perspex scale, station names, wavelengths and other markings are printed by the silk-screen process.

This scale is of interest in other respects also; particularly, in making use of the light-transmitting quality of Perspex, a quality that has previously been exploited in display design but seldom in product design. Perspex transmits light much more freely than glass, and conversely shows it up more when the transmitted light meets an interruption. On the Murphy scale, light from pilot lamps at both ends spreads throughout the strip of Perspex, throws the cream and green printed markings into relief, and makes a brilliant outline of the edges of the scale (since they have a matt surface).

The scale stands out in front of the cabinet instead of being recessed as is the more usual practice. Two pillars—in which the pilot lamps are concealed—hold it in position well clear of the front panel, leaving space behind for the cursor or pointer. This projects through a narrow slot in which it is free to travel from side to side.

The use of a projecting scale reduces the cost of the cabinet appreciably: a recessed scale would necessitate the cutting of a large aperture in the wood, and the edges of this would have to be finished, either by painting them or by covering them with a cross-banded veneer. Both processes are costly, and painting,



At point of sale: the 124 on a Murphy display stand for dealers

especially, is difficult to maintain at a high standard during a long production run. The criticism might be made that a projecting scale inevitably forms a dust-trap on the face of the receiver, but this criticism would to some extent apply also to the more usual type of recessed scale.

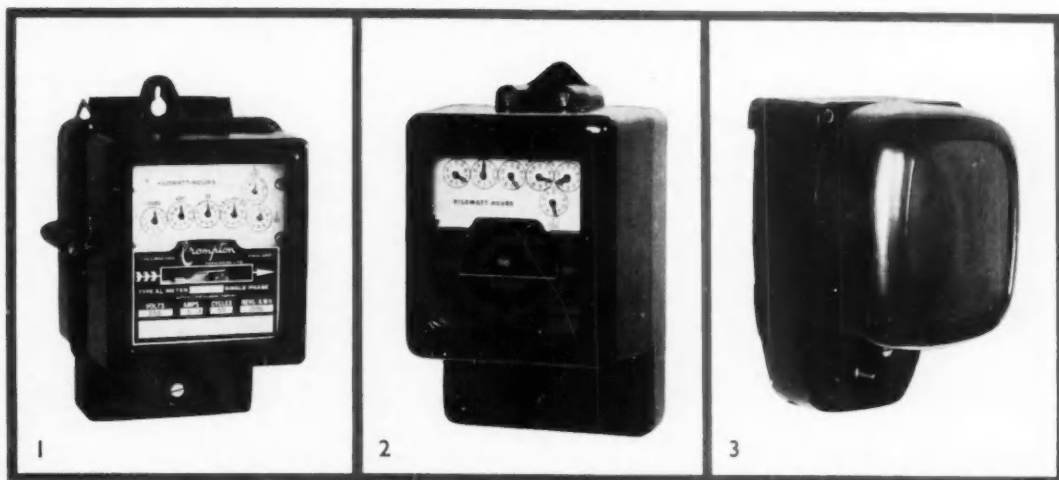
The main panel of the cabinet—the baffle board itself—is of wood, half-an-inch thick over most of its area, increasing to one inch at the top, veneered in bright-finished West African mahogany with the edges of the loud-speaker opening cross-banded in the same veneer. The end supports, which are approximately triangular in shape, are veneered for contrast in a light shade of sycamore. The back and base are combined in a single piece of fibre, held in position by four screws. Its removal renders all working components accessible—both those which are mounted on the chassis and those underneath it.

The control knobs of the 124 are of new design, generous in size and with serrated edges, and they stand well clear of the panel so that the user is less likely to blemish it with finger marks. The same consideration influenced the designer's decision to provide a recessed finger-grip at the top rear edge of the cabinet so that in moving the set it is not necessary to hold it by its veneered front or its polished ends.

In the present condition of the radio market, with supply more than tending to overtake demand, the combination of low price and "care in design" evident in the Murphy 124 will have opportunity to prove its commercial value.

Edward Paxton

A NEATER METER



Step-by-step evolution of a redesigned model

THE AVERAGE HOUSEHOLDER'S electricity meter is not his most prized possession. He sees very little of it, hidden away in its dark corner under the stairs; indeed, he would probably be quite content if neither he nor "the man from the Board" ever saw it at all.

It is therefore something of an event for a meter-manufacturer to redesign his product with the aim of improving, amongst other things, its appearance: especially when the manufacturer is one of the largest and oldest-established in the business.

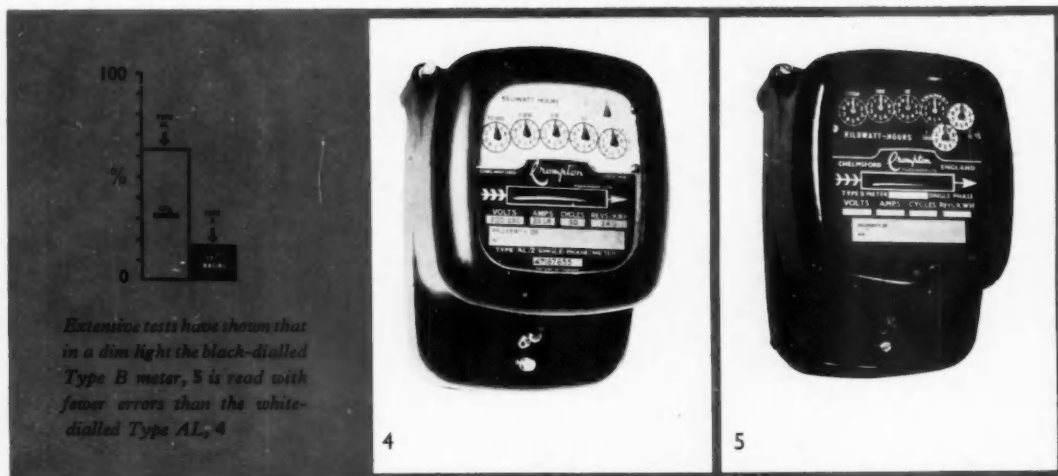
This course has recently been taken by Crompton Parkinson Ltd, whose long history is evident to any newspaper-reader who has studied the almost legendary achievements of the late Colonel Crompton, RE—the man who brought electric light to the Viennese Opera, the Taj Mahal, the Royal Courts of Justice, Strand, and a good many other unlikely places. The company's size is equally evident from the fact that it has seven factories in England, between Guiseley in the north and Midsomer Norton in the south, as well as three in the Dominions.

Starting-point for the changes which have now been made was the pre-war Crompton meter shown at 1. It was considered that this would not be sufficiently up-to-date for the post-war market because of various technical improvements developed during the war years. These improvements were therefore embodied in an experimental meter, 2, which was also to some extent cleaned-up in appearance, both the

shape of its case and the layout of dials being tidier than before.

Crompton directors soon decided, however, that these improvements were not enough; so they called in a consultant designer, Frank Mortimer, who evolved a new prototype, 3, after consultation with the firm's production engineers. This was altogether more curvilinear than the earlier meters: though in fact moulded in plastics, they had a 'cast-iron' look about them—a hangover from earlier types of meter. The new design, on the other hand, looked like what it was: a plastic moulding. It was designed with the smooth curved surfaces and well-radiused edges that help the moulding-powder to flow and the moulding to draw cleanly from the mould . . . besides being more pleasing to the contemporary eye. In addition, the triangulation of fixing screws introduced in 2 was made more thorough in 3: the top screws were placed the full width of the case apart.

With minor modifications, this design has now gone into production. The differences are evident when Mr Mortimer's prototype is compared with the new production model, 4. Although they may not be considered to have markedly improved the appearance of the meter, they have at least two practical merits. First, the curved glass of the prototype has been replaced by a flat glass because of trade custom: men fixing meters usually carry them two at a time, face to face; and curved glasses, touching each other, would occupy more space and run a far greater risk of being



The new Crompton Parkinson meters, above, developed from Frank Mortimer's prototype 3 (on preceding page) show a basic change of shape from the pre-war production model

broken in transit. Second, the upper corners of the case, in which the screw-holes are placed, have been given 'ears' to widen the base of triangulation still further, and to provide more clearance for a screw-driver.

Latest chapter in this story of successful redesign is the introduction of the black-dialled Type B meter, 5, as an alternative to Type AL, 4. Crompton Parkinson have made extensive tests of readability in even dimmer lighting conditions than those which characterise meter installations generally, and the results show that Type B is much more readable. (Contrary to popular opinion: for most people, on first seeing the two dials, vote in favour of Type AL.) When twenty-four readings were taken at the very low light-intensity of 0.015 foot-candles, there were 15 errors with the Type AL meter, and only 4 with Type B.

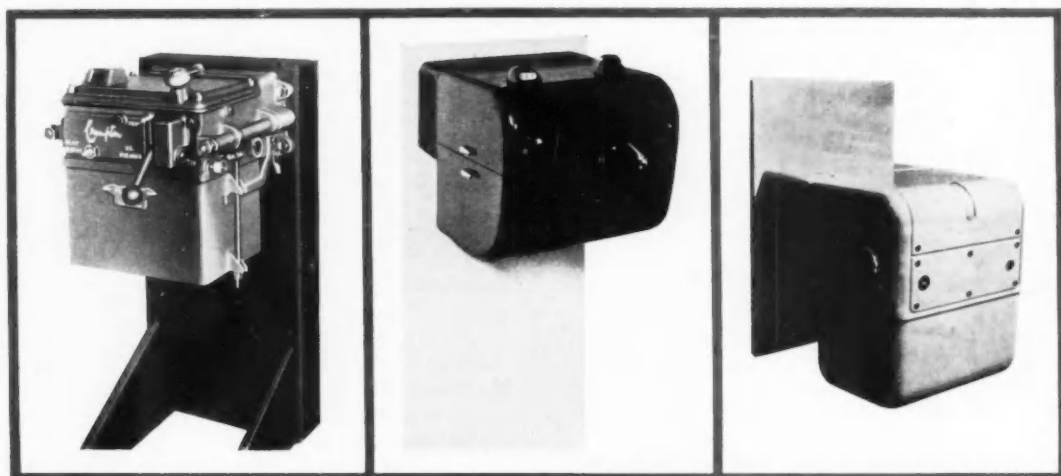
Typographically-minded readers will notice an improvement in the style of lettering between the pre-war meter and 5. The nondescript sanserifs of the original model have been replaced by characters based on Condensed Sans and Cable type-faces. An unprejudiced observer might question whether the informal script of the word *Crompton*, in either its original or its slightly modified form, is the best kind of lettering to suggest accuracy and precise engineering; but clearly the manufacturers consider that the goodwill attaching to it, because of its familiarity, is a decisive point in favour of its retention.

With technical products such as these, even when the products themselves are well-designed, their packaging is not always all that it might be. This final detail is well looked after by Crompton Parkinson. For shipping, each meter is packed individually in a carton marked on the outside with all the necessary information, and the cartons are packed inside a wooden case with wood-wool separating them from it and from each other.

An electricity meter is hardly susceptible to the same sales-promotion methods as chocolate bars or health salts, but the new Crompton meters have got themselves talked about in the trade, and production has already reached a considerable quantity. The redesign has met with a wholly favourable reaction from the market, which consists of electricity authorities at home and overseas.

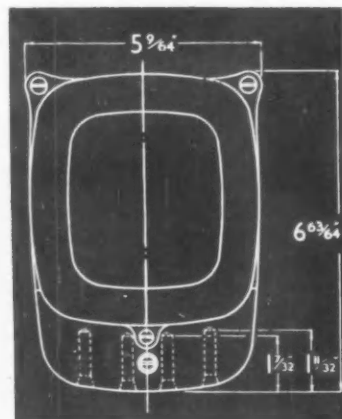
Postscript on an oil circuit-breaker

Crompton Parkinson Ltd have also recently commissioned Frank Mortimer to redesign their *Klad Minor* oil circuit-breaker (a mains switch for factories and similar installations in which medium-heavy currents are involved). The original model, which has been in production for many years, has almost everything stuck on the outside, like an early American



(Above) The oil circuit-breaker as originally designed (left); redesigned without drastic mechanical changes (centre); and completely redesigned

(Right) Another view of the prototype meter 3 and, in diagrammatic form, the production model 4-5



locomotive; the designer's task was to evolve a new form which would give improved performance and appearance, and at the same time lower the cost of production.

In his redesign, Frank Mortimer replaced the adjusting wheels at the side by levers, because it was unnecessary to turn them through more than one-third of a revolution; but otherwise the mechanism was unaltered. The new model was much neater than the original; a not unsatisfactory answer to the problem which had been set. The designer considered, however, that better results could be achieved by more drastic changes; and at the same time, Crompton Parkinson's desire to produce an oil breaker in which an ammeter was incorporated (in addition to one without) provided the opportunity for a completely

new model. In this second redesign, the main operating switch was moved from its original off-centre position to the outside of the case, thereby reducing the amount of gearing required; smaller projecting switches were replaced by press-button controls; and a drum-type ammeter, to be read through a window inset in the top of the housing, was incorporated. Because this ammeter was an optional fitting, the window could be replaced by a curved nameplate if it was not required.

Unlike the domestic meter, the new oil breaker has not yet gone into production, but Mortimer's design has met with approval, and if Crompton Parkinson introduce a new oil breaker at all, this is undoubtedly the type they will make.

A.D.

DESIGNERS IN AMERICAN INDUSTRY

A first attempt at statistical assessment

SCEPTICAL THOUGH WE are of all statistics, we could not resist the temptation to study closely some figures on *American Business and Industrial Design* in a report of that name, recently prepared by the American Management Association in collaboration with the Society of Industrial Designers.

A postal questionnaire brought replies from ninety-five fairly representative companies on their use of industrial designers (the term implying stylists or artist-designers rather than designers in industry generally). The questioners modestly pointed out that: "The first conclusion to be drawn from the data . . . is that further investigation . . . is needed. . . ." and this qualification must be clearly remembered if the replies are not to prove misleading. They represent a first attempt to obtain specific information in a field where generalisations have long abounded.

The first question was intended to find out "whether design is considered a basic factor, for which top executives must be responsible," and brought the answer that it *was* in 39 per cent of the companies, while in a further 17 per cent it was the responsibility of a committee representing various sections of the company. In other words, more than half the firms took decisions on design at a level higher than departmental.

Engineering or sales department?

Among those in which design was a departmental responsibility, it fell to the engineering department in far more cases than to the sales department (28 as against 12 per cent)—perhaps a surprising fact.

The question "Does your industrial designer follow through the engineering and tooling stages to see the product in production?" was answered by only forty-eight companies, and three-quarters of these said *No*. Several manufacturers "went out of their way to add a note to the effect that their consultant designers were specifically consultants, whose only responsibility was to advise and criticise."

Of the firms using consultant designers, more used them jointly with staff designers than used them alone—supporting our belief that there is plenty of scope for both. The actual figures were:

	per cent
Staff designers only	30.5
Consultant designers only	21.0
Both	31.5
Neither	17.0

Among firms manufacturing consumer-goods only,

the proportion using both staff and consultant designers was even higher—44 per cent.

More firms used consultant industrial designers for "some products" than for "all products," and their second most widespread use was for "special printed matter," which suggests that American industry is not yet completely 'sold' on the idea of product design. A further hint of the same state of affairs is this comment made by one of the firms questioned: "The great weakness of industrial designers is that they do not know factory production problems and factory costs." (Surely another way of saying that they fail to live up to their name?)

Methods of payment

In a section dealing with the basis of remuneration—evidently referring to consultant designers only—manufacturers were asked to state the method which they considered most desirable, as distinct from the method which they were currently using. A monthly or yearly retainer, plus costs, was favoured by 48.3 per cent—slightly more than the number favouring a fee for each job (44.8 per cent). The report comments: "Most industrial designers . . . feel strongly that they can render the best service working on a retainer basis." On this matter there is probably little difference between American and British opinion.

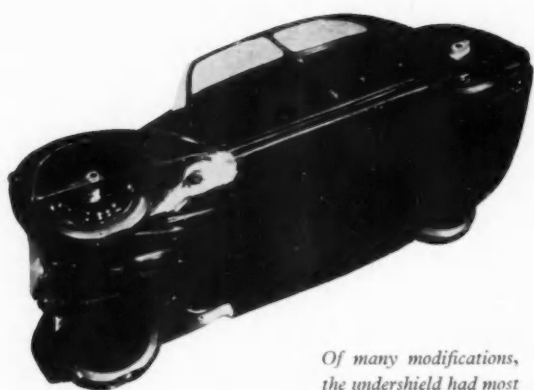
The report provided statistical confirmation of a number of views which have in the past been widely held though unconfirmed:

that the number of companies undertaking any necessary market research is far higher than the number expecting the consultant designer to undertake it (83 per cent, 15 per cent);

that manufacturers of consumer-goods make more use of industrial designers than manufacturers of capital-goods;

that the use of industrial design (in the specialised sense of the questionnaire) is increasing.

We could not hope to find better closing sentences—sentences more completely applicable on both sides of the Atlantic—than this quotation from the American Management Association report: "It is generally agreed, among those with a knowledge of the field, that the industrial designer cannot do his best work unless he can participate in the basic planning that precedes production. The designer who is asked to give exterior charm to a product already in manufacture is working under a great disadvantage."



Of many modifications, the undershield had most effect on performance



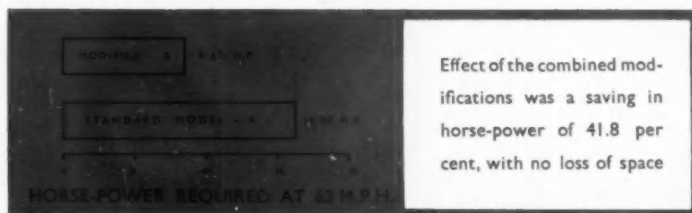
Streamlined . . . but not for show

IS STREAMLINING OF any value in the ordinary family car, travelling at ordinary speeds? Has it any measurable effect on performance, or is it just a sales stunt? These questions have provoked a good deal of discussion—and even, at times, heated argument—among designers.

To give factual answers, instead of conjectures, was the purpose of a series of experiments carried out in 1940 at the Stuttgart Technical High School, where a scale model of a normal saloon car was modified in various ways, and the resultant changes in wind-resistance were measured in wind-tunnel tests. Records of the experiments were captured by the French when Stuttgart was occupied immediately after the War: later they were translated and published by the research association of the French motor industry, and more recently they have been made known in Britain through *The Motor*.

The basis for the modifications was a normal Mercedes-Benz four-door saloon; they moved further and further away from normality until a shape was evolved that reduced wind-resistance to the minimum possible *without reducing passenger space*. The reduction was measured in terms of the horse-power required at 62 miles (100 kilometres) per hour. In its original form, the car needed 16.55 horse-power to propel it at this speed: with the most

Top, the Mercedes-Benz model in standard form; below — fully modified



successful combination of modifications, the figure was reduced to 9.62 horse-power.

The changes which progressively brought about this drastic reduction began simply enough with the removal of minor excrescences such as the radiator badge and the front number-plate; they were extended to the re-shaping of bonnet, wind-screen, mudguards and tail. It was not always the obvious changes that had a marked effect on performance; indeed, the one innovation that brought about a greater improvement than any other was out of sight underneath the car. The fitting of a smooth under-tray to enclose chassis members, axles, transmission and indeed everything on the underside except the wheels, saved, in a single blow, practically 2 horse-power—28 per cent of the total saving.

The Stuttgart experiments are of course by no means the first wind-tunnel tests on cars, the results of which have been made known: but they are of special interest for two reasons—one, because the speed chosen, though admittedly rather higher than average touring speeds in England, was well within the average touring car's capacity; two, because the size and shape of the passenger accommodation remained unchanged throughout the series of modifications. There was no question of sacrificing head-room or leg-room to aerodynamic efficiency—let alone to fashionable appearance.

Illustrations of the Mercedes-Benz model are reproduced from the Stuttgart report, as published in translation by the Centre d'études techniques de l'Automobile et du Cycle, Paris.



Red, white and black

A NEW DRAUGHTS SET is moulded in plastics by Brookes and Adams Ltd, of Hockley, Birmingham.

The designer, Mr Arnold Brookes of that Company, has succeeded in investing the familiar pieces with a new interest; their conventional shape is dictated by tradition, but he has provided them with a shaped container which enhances their simplicity. Moulded in Beetle, it is available in white, black or red.

A good deal of thought has been given, also, to the design of the pieces themselves. They are designed and accurately moulded to nest firmly one upon the other. This enables the kings to be moved freely about the board without fear of the top piece sliding off; it also enables the pieces to be stored very compactly within their container. The complete set has an attractive glossy finish. The ivory-toned pieces are moulded in Beetle and the black pieces in Bakelite.

Lightweight scarves from Scotland

FRESHNESS OF OUTLOOK is combined with the traditional craftsmanship of the Scottish handloom weaver in new styles of woollen fabrics produced at Killearn, in Stirlingshire, by Miss A. C. M'Credie.

During the war—when she was teaching embroidery and weaving at Glasgow School of Art—she experimented with scarves of unusually open mesh, using at first strands of wool only, then introducing other materials such as silk, jute and Cellophane.

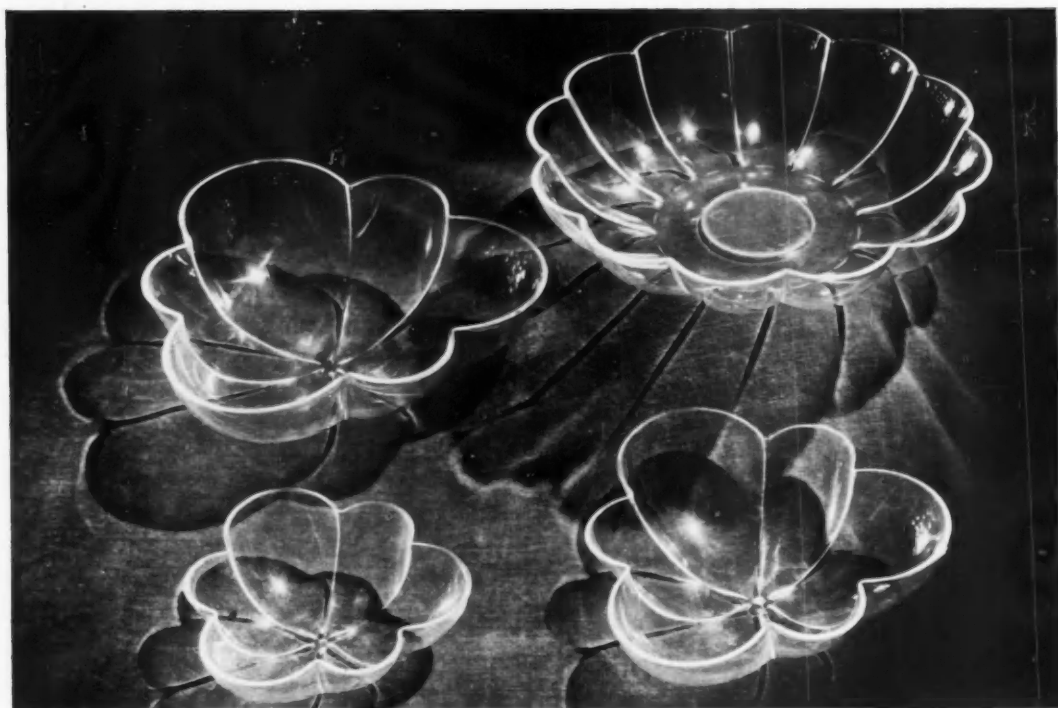
The scarves which she is making to-day measure 42 inches by 10 inches and weigh only one ounce. They are coloured in a range of reds, pinks and yellows, and their open weave gives them a cellular effect: the ends, however, are darned back. Evening scarves of wool and silk, two yards long and 27 inches wide, weigh about four ounces.

Miss M'Credie is assisted by

Miss Doris Meek, who was formerly her assistant at the Glasgow School of Art. Besides scarves, their products

include perambulator rugs, lampshades and cushion covers using unspun wool for decorative effect, and wall-mats of jute, wool and Cellophane.





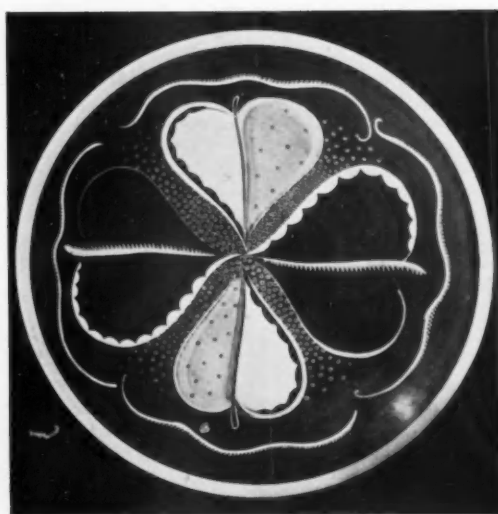
Set of fruit bowls in Perspex, designed by Peter Lambda

NEW DESIGN IN PICTURES

*Electrically-driven toy tugboat manufactured by Casceloid Ltd
(Designer, W. A. G. Pugh)*



*Plaque designed by Susie Cooper, RDI, with sgraffito and
hand-painted decoration*



New books

PATTERN AND DESIGN

by N. I. Cannon

(Lund Humphries, 21s)

THIS BOOK is a plea for freedom and spontaneity—a bold attempt to carry over the exuberance and vitality of children's work into the more specialised training of the art school. A difficult assignment, no doubt, but the author is appalled, and rightly, by the usual provincial art-school approach to design; the dead copying of forms from often not-too-good sources, the geranium leaf repeating itself *ad nauseam* along a faded border.

Yet when it comes to carrying out this laudable object, how difficult! Obviously some principles of design must be formulated at the age of 16-plus. One cannot sail through the art school without them (though many seem to have done so) and some are here enumerated. "Good art," says the author, "is not the result of accident, but of clear logical thought." The principles of design are the subject of endless discussion—but not in England; to quote Paul Nash, "only the most stubborn can dispute that English art has always suffered from one crippling weakness—the lack of structural purpose. With few exceptions our artists have painted 'by the light of nature' . . . This immunity from the responsibility of design has become a tradition . . ."

Mrs Cannon uses the headings Unity, Proportion, Relation, Harmony, Discord, Contrast, Domination, Subordination, Symmetry, Asymmetry, Duality, Balance, Rhythm; and these, even partially understood, would not be a bad foundation for the designer. The elucidation is necessarily short and at times perhaps a little woolly. Take Unity: "Good design depends on the relation of one form, line or shape with another; when these forms or parts of forms are in harmonious relationship, the result is unity . . ." One cannot

keep out of one's mind Gropius's statements: "real unity can only be achieved by coherent re-statement of the formal theme, by repetition of its integral proportions in all parts of the work," and — simpler still — "form elements of typical shape must be repeated in series." These are so clear, concise, easily remembered, almost axiomatic.

The book is lavishly illustrated in line, colour and half-tone, but all the illustrations are the work of students aged about 16. Now this is surely over-generous to the students. *Pattern and Design* is a Lund Humphries book (excellently laid out by Vivian Ridler) and it should carry authority; the pictures will be seized-on as exemplifying principles laid down, and this they fail to do. They are exuberant, forceful, full of inventiveness and joy, *but they are not design*. How should they be, at this tender age? One has only to turn to the frontispiece to see the faults of all; the horrible undulations, the attempt to balance totally dissimilar forms, unsubtlety of relationships and uncontrolled texture. One glance at this by the undertrained might well give sanction to Tottenham Court Road Modernistic—obviously the last thing the author would desire. The units of this design, a few leaves and some large geometrical shapes, have been used by Léger in a much reproduced design (sometimes upside down) and its inclusion would be appropriate as a corrective. The point must be emphasised because the pictures will get undue attention, whereas the text deserves most careful reading; teachers are presented with a multitude of suggestions for study and experiment, any one page of which could be expanded without limit.

Jesse Collins

HISTORICAL BACKGROUND

RECENT MONTHS HAVE seen the publication of an unusually large number of books that give the historical background to design in many fields.

On dress, Alison Settle has written *English Fashion* (in the "Britain in Pictures" series: Collins, 5s), and C. Willett Cunningham *The Art of English Costume* (Collins, 16s)—a book of 240 pages with more than fifty plates, of which perhaps the most striking shows a Stiebel "New

Look" dress alongside one of 1886 . . . Another well-known writer on costume, James Laver, is the author of *British Military Uniforms*, an addition to the half-crown "King Penguin" series, as colourful in its illustrations as in its subject.

Scotland has a proud record in the craft of book production, yet *Scottish Crafts*, by Ian Finlay (Harrap, 17s 6d) has been designed and typeset in England and printed in Holland. Even a Scottish Nationalist would have to admit, nevertheless, that it is well produced and admirably illustrated. Most of its pictures will be new to most of its readers, one feels, and Scottish industry may find inspiration in some of them . . . A Batsford book by Donald Smith, entitled *Metalwork* (7s 6d) deals with its subject historically, though the name might not suggest it; and in a less familiar field, Hugh McCausland's *The English Carriage* (Batchworth Press, 16s) does the same. The jelly-mould shapes of present-day cars are most unworthy descendants of the horse-drawn elegance which he illustrates.

Style in Pottery (Oxford) is a wise and well-written essay by Arthur Lane of the Victoria and Albert Museum. He uses the word *style* to mean "good handling of potter's material—not necessarily the 'style' of a particular epoch in art-history." His illustrations range from ancient Persia and Peru to the modern Murrays (Staite and Keith). They are plentiful and well reproduced: indeed, the typography and production of the whole book show Oxford University Press at its customarily high standard—but the format of *Style in Pottery* invites comparison with King Penguins and makes its price, 6s, seem high . . . Bernard Rackham's *Medieval English Pottery* (21s) continues the series of Faber Monographs on Pottery and Porcelain; its brief text serves as introduction to 100 plates. Many of the fourteenth-century jugs shown have a satisfying roundness that could scarcely be surpassed. Among the wares of this period, there are (in Mr Rackham's words) "few that do not fulfil to perfection the purpose for which they were made; their faults lie not in defects of design but in the imperfect development of their materials." D.

DESIGN AND PRODUCTION



Made in Fibrenyle thermoplastic material, this model Handley Page air liner was shown in the recent exhibition of synthetic materials

Plastics without pressure

THE HIGH COST of steel moulds and moulding presses is well known to anyone who has ever used plastic mouldings—or thought of using them. It virtually restricts their usefulness to products which are made in very large quantities of a uniform design. There is therefore bound to be considerable interest in a process which enables shapes to be formed in plastics without power or pressure, employing inexpensive formers of cement or plaster of Paris instead of expensive steel moulds. Such a process (now the subject of patent applications in Britain and the USA) is made possible by the use of a new material, which unlike many present-day plastics, is *plastic* in the earlier sense of the word.

This material, Fibrenyle, reaches the fabricator in sheet form, packed in airtight containers. The sheet is as flexible as, say, cloth or damp leather. It is cut to approximately the size of the article to be made from it, and is then spread by hand over a former of the same dimensions as the interior of the finished article; it is supple enough to fit snugly round any shape, of any curvature. In normal climatic conditions the Fibrenyle sheet would then take some little time to dry out and assume the shape of the former, so in practice the drying is accelerated by

heat—which not only speeds production but reduces the number of formers (and correspondingly the amount of space) required. Radiant heating by electricity is the best technique, but steam heating is also satisfactory.

Another way in which Fibrenyle can be used to advantage is to pre-form the sheets for use in a plastic moulding press of conventional type. If a deep tray or a box, for example, is to be moulded the sheet is roughly shaped before it is put into the press; there is no attempt at precision or detail work. This “pre-form” requires no more than a rapid stamping action in the press—there is no delay, as there is when a moulding powder is used, while the powder liquefies and flows.

Fibrenyle can be used also for injection moulding and for this purpose it is supplied in dry ground form (*i.e.*, powder). The Fibrenyle sheet is produced in a range of thicknesses and a range of colours. It can be drilled or tapped for screw holes. It has a matt surface naturally but can be stoved to give a crackle finish, or spray-painted if a gloss is required.

Already EMI have used Fibrenyle for the two-colour radio cabinet illustrated; Revelation suitcases are using it for the “shell” of their train cases and brief cases, and Hollerith for covers on their accounting machines. Of its other uses, there is space to mention only a few: instrument cases, display figures,



Another of Fibrenyle's many applications—two-colour radio cabinet (EMI). This was also seen in the exhibition of Synthetic Boards, Plastic Laminates and Resin-bonded materials organised by the Council of Industrial Design (London: October–November 1948)

chair seats and backs and side-car body work give some indication of its versatility. Outstanding characteristics are summarized below: *Weight*: 38–48 lb per cubic foot. *Size of standard sheets*: 30 in. by 24 in. *Thicknesses*: $\frac{1}{32}$, $\frac{1}{16}$, $\frac{3}{32}$ and $\frac{1}{8}$ in. *Tensile strength*: 5,000–7,000 lb per sq inch. *Suppliers*: Fibrenyle Ltd, 84A Kilburn High Road, London, NW6.

Wood-veneered aluminium

VENDURA, MADE BY Venesta Ltd, is a decorative laminated material. It consists of aluminium sheet with a thin veneer of wood on one or both sides. Redux adhesive is used as the bonding material and the bond is so strong that the sheet can readily be bent to curves of very small radius. (If the veneer is on the inside of the curve, it can be bent either way; if it is on the outside, the bend should be along the grain of the wood.)

The aluminium base is of 18 s.w.g. thickness, and the woods with which it is usually veneered are mahogany, walnut and sycamore, though others can be used as required—and available.

Vendura is resistant to moisture and its makers claim that it can be immersed for considerable periods without damage: indeed, some users soak it in water to soften the wood fibres as an aid to bending (though

this is not essential). Because its wood-content is small, it is resistant also to fire and to termites.

The material can be pressed into double curvatures without splitting or lifting the veneer. To give an unusual decorative effect, its surface can be etched, revealing the aluminium base along the etched lines.

Vendura has many applications in coachbuilding, panelling, furniture and cabinet-making and in the production of smaller domestic wares. It can be cold-rolled into sections of almost any shape: this is, in fact, being done by Warwick Rim and Sectioning Co Ltd, who market the resultant sections under the name of Venduraform. They are suitable for use in handrails, picture rails, picture frames, corner mouldings and beadings.

Other facts about Vendura are: *Weight*: approximately 14 oz per sq foot. *Size of standard sheets*: 72 in. by 36 in. *Tensile strength*: approximately 10,000 lb per sq inch across grain, 12,000 lb along grain. *Licence-free*. *Suppliers*: Venesta Ltd, Vintry House, Queen Street Place, London EC4.

Woodworking developments

MONOCOQUE OR EGGSHELL construction—a technique which is finding a widening field of applications—has been applied to helicopter blades for the first time by H. Morris and Co Ltd, Glasgow furniture manufacturers, in making the nine blades for the Cierva Air Horse. Each of these consists of a leading edge built up from compressed wood (Canadian birch laminations impregnated with phenol-formaldehyde) and a skin, $\frac{1}{8}$ inch thick, consisting of four laminations of Canadian birch and African mahogany. There is no internal ribbing, and the blades, 24 feet long, weigh only 125 pounds. They are claimed to be lighter, stronger, smoother and more weather-resistant than conventional types.

Besides developing the technique of manufacture, Morris's had to design the jigs, tools and other equipment required for pressing the skins to a 24-foot length. This operation entailed a hydraulic press, aluminium moulds for pressing the skin, and steam-heated alloy dies.



Experimental chair designed by Ernest Pollak to demonstrate the use of Vendura to form a stiff shell-like structure

Technical publications

RECENT PUBLICATIONS ON the use of light metals include: *Commercial Castings in Hiduminium* and *Forgings in Hiduminium*, illustrated booklets from High Duty Alloys Ltd, Slough, Bucks; *Heat Treatment of Aluminium Alloys* from Northern Aluminium Co Ltd, Banbury, Oxon, and from the same firm a *Noral Data Sheet* which gives concise notes on aluminium and its alloys, and two tables showing the composition and properties of Noral wrought alloys and casting alloys.

* *

From the Aluminium Development Association, 33 Grosvenor Street, London W1, comes Information Bulletin No. 14, price 1s, entitled *Anodic Oxidation of Aluminium and its Alloys*. The foreword points out that: "The reputation of a material is largely associated in the public mind with the quality and preservation of its appearance, particularly for applications such as architecture and furniture . . . It is important to indicate the limitations of a process for which much has been claimed as well as to emphasise the care necessary in choosing material and methods." The book has been written with these considerations in mind. It includes 11 pages on the

dyeing of anodised aluminium, with notes on direct printing and photographic printing on this material. There is a short bibliography, and the illustrations include several colour plates.

* *

Nickel Alloy Steels: A Summary of their Properties and Applications can be obtained from the Mond Nickel Co Ltd, Grosvenor House, Park Lane, London W1. Its sub-title gives a clear indication of its contents.

* *

'Dulux' Finishing Systems for Transport and Commercial Vehicles is factual and at the same time unusually well illustrated for a booklet of this kind. Rail coaches as well as road vehicles are referred to. (Imperial Chemical Industries Ltd, Paints Division, Slough, Bucks.)

* *

How's it Done?, though primarily an advertisement for Perry Colourprint Ltd, Arundel Works, Deodar Road, London SW15, gives some idea of the potentialities of photo-offset in commercial printing, with pictures of various stages in production.

Comment

JUST BEFORE THE war, an instrument for carrying out a certain type of blood-test was introduced by a British firm. It was as good as anything of its kind anywhere in the world—yet commercially it could not compete with an American instrument. In the British model, the electrical switches were stuck on like outsize barnacles, with fluted brass domes and porcelain bases. In the American model, they were part of the design, neat and flush-fitting. A cautious scientist admits that this may have had something to do with the different degrees of popularity of the two instruments.

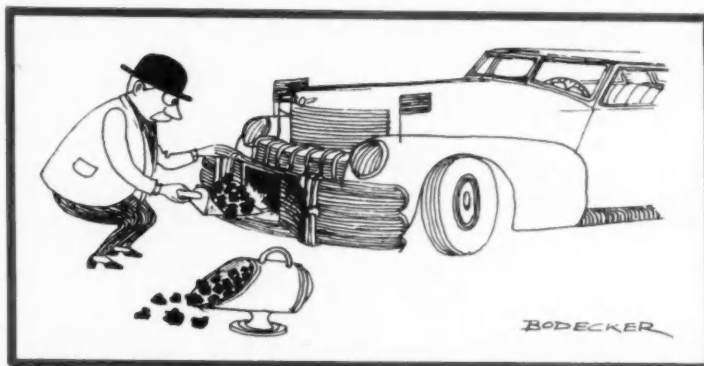
A CORRESPONDENT IN the States sends news of a new Kellogg cereal carton in use there. It has a close-fitting lining of waterproof waxed paper. You tear open one side of the carton (plus lining), pour in the sugar and cream, and start eating. Whether the cartons are unusually small, or appetites must be unusually large to make good use of them, I have not yet discovered.

★ ★

GORDON RUSSELL'S COMMENT, on another page, that designs intended for hand-production and turned over to the machine are unsatisfactory, set me thinking of the mock-Jacobean furniture that was popular a few years ago. We sometimes think of it as an abomination dating from the 1920's, but its history goes back a good deal further; I recently found this advertisement in an *Illustrated London News* of 1875:

HOWARD'S JACOBAN FURNITURE. The style being peculiarly adapted for production by machinery, Howard and Sons, Cabinet Manufacturers by Steam Power, invite applications for Designs and Estimates, which are supplied free of charge, for every description of Furniture, Wall Panelling, Ceilings, Fireplaces and Flooring.

MANY ODD ENQUIRIES come the way of the Council of Industrial Design. The other day a telephone rang in the Production Department



and a bland voice (which discreetly omitted to reveal its owner's identity) asked: "Has the Council given any ruling on the correct degree of slope for an italic letter?" Or, as we expected it to ask next, how long is a piece of string?

★ ★

A BELGIAN CORRESPONDENT tells me that in his country wooden cabinets for radio sets are greatly preferred to plastics. Need the comment be restricted to Belgium? I suspect that a similar prejudice also exists in this country, except in regard to miniature sets, for which plastic cabinets are now generally acceptable. One reason for the hard thinking that went into the design of the new Murphy 124 was Murphy's desire to produce a wood-cased set in a price-range in which many of their rivals, taking an easier path, use plastics.

★ ★

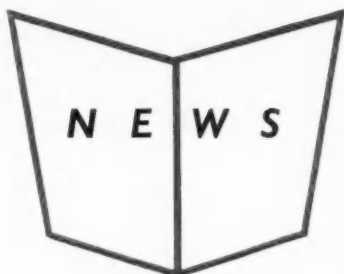
TAILPIECE: I recently came upon a startling sidelight on the American industrial design practitioner, which, though several months old in the States, may be new to English readers. It was printed in a small news-letter called *The Streamliner* [sic] put out by one of the more prosperous New York promoters in the business. To do justice to its uninhibited bravado I must quote at some length:

... We are living in an exciting revolutionary age. New materials, new

techniques, new energies are being released to serve mankind and the Industrial Designer has somehow become the hub and focal point of our fast changing civilisation. . . . What with new ideas and new problems our work is so darned interesting we sometimes marvel that people PAY us for what we do. I hope we can convey some of our own excitement in these pages. . . .

... For instance, for the last few months we have been working on a machine for sitting, commonly known as a chair. We have been spending a lot of time trying to make that chair more comfortable than any chair any body ever sat in. A large order, because people's rear ends come in the most amazing assortment of sizes and shapes. You might say that technically our effort is to get the least common denominator of the human fanny. So we have staged a sit-down strike of our own. We asked all and sundry to sit down on a piece of clay, until we got a composite impress of their nether ends. For artistic inspiration we induced some of Powers' most glamorous models to sit in our embryo chair. This phase of the development was very popular with the boys on our staff, who took measurements of some of the prettiest tails in town. . . . If we have captured only a small percentage of the pulchritudinous curvatures that were impressed in our clay, our chair will rank among the greatest, and Egmont Arens will march down the ages with Heppelwhite, Sheraton and Chippendale.

That was shown to me by an American in all seriousness as a smart piece of promotion. Perhaps I am old fashioned, perhaps the Industrial Designer is at the hub of the universe, spinning on his fanny like a top at the very vortex of the New Jerusalem, a polydactyl with a finger in every pie and a line on every angle. But what about Taste? Did that little Cinderella sit in the clay too? **QUEX**



Industrial Finishes on show

BECAUSE THE DURABILITY and the appearance of an article both depend to a large extent on its finish, the Council of Industrial Design has for some time been interested in the problem of industrial finishes—a problem that becomes more and more complex as the range of basic materials and the range of finishes grow wider. Investigations, in which Mr S. D. Cooke of the Council's Industrial Division took a leading part, showed that a specialised exhibition could do much to inform designers and manufacturers of new technical developments in this field, and at the same time could be made sufficiently interesting to attract the public.

A meeting to discuss the proposed exhibition was held in London last November, with an attendance of about 250—mostly representatives of trade and technical associations, firms making finishing materials and plant, and Government departments. Sir Charles F. Goodeve, OBE, DSC, FRs, took the chair, and the meeting approved suggestions that the exhibition should be held—with a Central Technical Exhibit, a Council stand and individual firms' stands; that Armstrong & Co (Wridale) Ltd should take over the organisation from this point; and that Mr Warnett Kennedy should be responsible for the overall design of the exhibition. It will include metallic and non-metallic finishes and ancillary equipment.

An advisory technical committee has been formed under the chairmanship of Mr E. A. Ollard, electro-deposition adviser to the British Non-ferrous Metals Research Association; and the ground floor of Earls Court exhibition hall has been booked for the period 31 August–13 September. Enquiries should be addressed to Industrial Finishes Ex-

hibition, 26 Old Brompton Road, London SW7.

The purpose of Council participation in this project is to emphasise that, for lasting quality, articles must be designed so that they will receive the finishes required: and to show how this can be achieved.

Midland Association formed

MORE THAN FIFTY designers were present at a meeting of the newly formed Midland Industrial Designers' Association, held in Birmingham on 3 December.

This Association "has been formed to establish a focal point in the Midlands for matters concerning industrial design and the industrial designer." Its membership is restricted to practising designers—staff or consultant—and teachers of design. Rubber, plastics, metal, jewellery and textiles are among the industries represented. The committee consists of Mr John Barnes (Allan-Bowden), chairman; Mr A. H. Woodfull (Streetly Manufacturing), secretary; Mr Robert Cantor (Dunlop Rubber), treasurer; Mr K. F. Haylor (GEC), and Mrs Tibor Reich (Tibor Fabrics). Enquiries should be addressed to Mr Woodfull at 47 Farnol Road, Yardley, Birmingham 26.

Book Design exhibition

THE annual exhibition of book design organised by the National Book League is to be held in May. The two judges are Mr Walter Lewis, formerly Printer to the University Press, Cambridge, and Mr John Carter, publisher and bibliographer.

Interest in Colour Course

ENROLMENTS for the recent course on "Colour and Lighting in Factories and on Machines" totalled 177.

SUBSCRIPTIONS

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CONTRIBUTIONS

The Editor welcomes contributions and suggestions for articles. Material published will be paid for.

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Architects, consultants and paint manufacturers accounted for the largest groups, but a diversity of other interests was also represented. The course was held at the RIBA from 24–26 November.

All the lecturers who had spoken during the course returned on the last afternoon to form a Brains Trust with Mr Basil Marriott as question-master. The written questions submitted occupied them for two and a half hours—some indication of the interest shown by those attending.

A number of independent designers who attended the course are available for consultancy work. The Council of Industrial Design will be glad to receive applications for their services.

Building Centre for Holland

A BOUWCENTRUM or Building Centre has been opened at Rotterdam—organised by a joint committee representing the official architectural and building organisations and the Government. Mr F. R. Yerbury, director of the (British) Building Centre, states: "It is intended that it should be of an international character, as Holland and other European countries which are expected to use *Bouwcentrum* rely to a great extent on imported materials and equipment for their buildings." *Bouwcentrum's* address is: Westerlaan 8, Rotterdam.

This issue: typography

THE TITLE of this journal is printed, on the title-page and (reversed) on the front cover, from line-blocks made from Stephenson Blake's Tea-chest type. Text is set in Mono-type Plantin 110, roman and italic, with headings in Gill Sans bold, roman and italic, and extra bold.

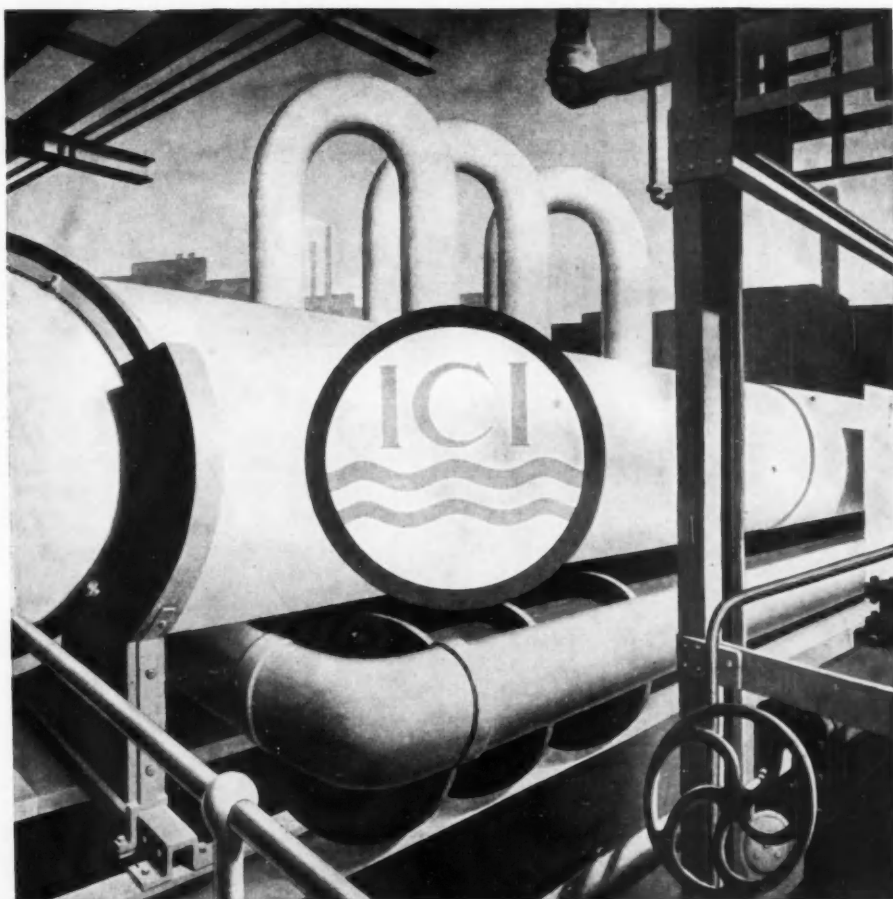
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PHOTOGRAPHS

Copies of many photographs reproduced in DESIGN can be purchased through the Council's Photographic Library (or borrowed by subscribers to the Library Service).

ADVERTISEMENTS

Classified advertisements can be accepted at 2s per line (minimum 6s); box number, 1s extra. A limited number of display advertisements can also be accepted: details on application.



THIS is the symbol of Imperial Chemical Industries Ltd., the great British chemical combine known familiarly throughout the world by its initials "I.C.I." Formed in 1926 by the amalgamation of four famous companies — Brunner Mond & Co. Ltd., Nobel Industries Ltd., The United Alkali Co. Ltd., and the British Dyestuffs Corporation Ltd. — I.C.I. is today a public company with an issued capital of about £84,500,000. The variety and range of its products are greater than those of any other manufacturer of chemicals and its sales organisation is world-wide. It is one of the

three biggest manufacturers of dyestuffs and organic chemicals and one of the largest producers of non-ferrous metals and heavy chemicals in the world. I.C.I. spares no money or pains to prosecute the intensive long-range research which enables it to keep ahead of competitors and leads to the great discoveries of the past two decades. It is a guarantee that the most skilful work in the laboratory is linked with characteristic British quality in the factory. Wherever you see the I.C.I. symbol you can be sure it stands for the best that chemical industry can produce.

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